0590/1126

#7

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/887,879

DATE: 12/21/2001
TIME: 15:12:39

Input Set : N:\Crf3\RULE60\09887879.txt
Output Set: N:\CRF3\12212001\I887879.raw

<110> APPLICANT: Ashkenazi, Avi J.
Baker, Kevin P.
Chuntharapai, Anan
Gurney, Austin
Kim, Kyung Jin
Wood, William I.

<120> TITLE OF INVENTION: Apo-2DcR

<130> FILE REFERENCE: P1110P1

<140> CURRENT APPLICATION NUMBER: 09/887,879

<141> CURRENT FILING DATE: 2001-06-21

<150> PRIOR APPLICATION NUMBER: 09/096,500

<151> PRIOR FILING DATE: 1998-06-12

<150> PRIOR APPLICATION NUMBER: US 60/049,911

<151> PRIOR FILING DATE: 1997-06-18

<160> NUMBER OF SEQ ID NOS: 17

<210> SEQ ID NO: 1

<211> LENGTH: 259

<212> TYPE: PRT

<213> ORGANISM: Homo sapiens

<400> SEQUENCE: 1

```
Met Ala Arg Ile Pro Lys Thr Leu Lys Phe Val Val Val Ile Val
  1               5                  10                  15
Ala Val Leu Leu Pro Val Leu Ala Tyr Ser Ala Thr Thr Ala Arg
             20                  25                  30
Gln Glu Glu Val Pro Gln Gln Thr Val Ala Pro Gln Gln Gln Arg
         35                  40                  45
His Ser Phe Lys Gly Glu Glu Cys Pro Ala Gly Ser His Arg Ser
     50                  55                  60
Glu His Thr Gly Ala Cys Asn Pro Cys Thr Glu Gly Val Asp Tyr
 65                  70                  75
Thr Asn Ala Ser Asn Asn Glu Pro Ser Cys Phe Pro Cys Thr Val
             80                  85                  90
Cys Lys Ser Asp Gln Lys His Lys Ser Ser Cys Thr Met Thr Arg
         95                 100                 105
Asp Thr Val Cys Gln Cys Lys Glu Gly Thr Phe Arg Asn Glu Asn
            110                 115                 120
 Ser Pro Glu Met Cys Arg Lys Cys Ser Arg Cys Pro Ser Gly Glu
            125                 130                 135
 Val Gln Val Ser Asn Cys Thr Ser Trp Asp Asp Ile Gln Cys Val
            140                 145                 150
 Glu Glu Phe Gly Ala Asn Ala Thr Val Glu Thr Pro Ala Ala Glu
            155                 160                 165
 Glu Thr Met Asn Thr Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu
            170                 175                 180
 Glu Thr Met Asn Thr Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu
            185                 190                 195
 Glu Thr Met Thr Thr Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu
```

RAW SEQUENCE LISTING DATE: 12/21/2001
PATENT APPLICATION: US/09/887,879 TIME: 15:12:39

Input Set : N:\Crf3\RULE60\09887879.txt
Output Set: N:\CRF3\12212001\I887879.raw

```
137                 200                 205                 210
141  Glu Thr Met Thr Thr Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu
143                 215                 220                 225
147  Glu Thr Met Thr Thr Ser Pro Gly Thr Pro Ala Ser Ser His Tyr
149                 230                 235                 240
153  Leu Ser Cys Thr Ile Val Gly Ile Ile Val Leu Ile Val Leu Leu
155                 245                 250                 255
159  Ile Val Phe Val
165 <210> SEQ ID NO: 2
167 <211> LENGTH: 1180
169 <212> TYPE: DNA
171 <213> ORGANISM: Homo sapiens
175 <220> FEATURE:
177 <221> NAME/KEY: CDS
179 <222> LOCATION: (193) . . . (969)
181 <223> OTHER INFORMATION:
185 <400> SEQUENCE: 2
187  gctgtgggaa cctctccacg cgcacgaact cagccaacga tttctgatag 50
191  atttttggga gtttgaccag agatgcaagg ggtgaaggag cgcttcctac 100
195  cgttagggaa ctctggggac agagcgcccc ggccgcctga tggccgaggc 150
199  agggtgcgac ccaggaccca ggacggcgtc gggaaccata cc  atg 195
201                                                    Met
203                                                     1
207  gcc cgg atc ccc aag acc cta aag ttc gtc gtc gtc atc 234
209  Ala Arg Ile Pro Lys Thr Leu Lys Phe Val Val Val Ile
211                5                  10
215  gtc gcg gtc ctg ctg cca gtc cta gct tac tct gcc acc 273
217  Val Ala Val Leu Leu Pro Val Leu Ala Tyr Ser Ala Thr
219   15                  20                  25
223  act gcc cgg cag gag gaa gtt ccc cag cag aca gtg gcc 312
225  Thr Ala Arg Gln Glu Glu Val Pro Gln Gln Thr Val Ala
227           30                  35                  40
231  cca cag caa cag agg cac agc ttc aag ggg gag gag tgt 351
233  Pro Gln Gln Gln Arg His Ser Phe Lys Gly Glu Glu Cys
235                   45                  50
239  cca gca gga tct cat aga tca gaa cat act gga gcc tgt 390
241  Pro Ala Gly Ser His Arg Ser Glu His Thr Gly Ala Cys
243       55                  60                  65
247  aac ccg tgc aca gag ggt gtg gat tac acc aac gct tcc 429
249  Asn Pro Cys Thr Glu Gly Val Asp Tyr Thr Asn Ala Ser
251               70                  75
255  aac aat gaa cct tct tgc ttc cca tgt aca gtt tgt aaa 468
257  Asn Asn Glu Pro Ser Cys Phe Pro Cys Thr Val Cys Lys
259   80                  85                  90
263  tca gat caa aaa cat aaa agt tcc tgc acc atg acc aga 507
265  Ser Asp Gln Lys His Lys Ser Ser Cys Thr Met Thr Arg
267           95                  100                 105
271  gac aca gtg tgt cag tgt aaa gaa ggc acc ttc cgg aat 546
273  Asp Thr Val Cys Gln Cys Lys Glu Gly Thr Phe Arg Asn
```

RAW SEQUENCE LISTING DATE: 12/21/2001
PATENT APPLICATION: US/09/887,879 TIME: 15:12:39

Input Set : N:\Crf3\RULE60\09887879.txt
Output Set: N:\CRF3\12212001\I887879.raw

```
275                 110                 115
279  gaa aac tcc cca gag atg tgc cgg aag tgt agc agg tgc 585
281  Glu Asn Ser Pro Glu Met Cys Arg Lys Cys Ser Arg Cys
283      120                 125                 130
287  cct agt ggg gaa gtc caa gtc agt aat tgt acg tcc tgg 624
289  Pro Ser Gly Glu Val Gln Val Ser Asn Cys Thr Ser Trp
291              135                 140
295  gat gat atc cag tgt gtt gaa gaa ttt ggt gcc aat gcc 663
297  Asp Asp Ile Gln Cys Val Glu Glu Phe Gly Ala Asn Ala
299  145                 150                 155
303  act gtg gaa acc cca gct gct gaa gag aca atg aac acc 702
305  Thr Val Glu Thr Pro Ala Ala Glu Glu Thr Met Asn Thr
307          160                 165                 170
311  agc ccg ggg act cct gcc cca gct gct gaa gag aca atg 741
313  Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu Glu Thr Met
315                 175                 180
319  aac acc agc cca ggg act cct gcc cca gct gct gaa gag 780
321  Asn Thr Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu Glu
323      185                 190                 195
327  aca atg acc acc agc ccg ggg act cct gcc cca gct gct 819
329  Thr Met Thr Thr Ser Pro Gly Thr Pro Ala Pro Ala Ala
331              200                 205
335  gaa gag aca atg acc acc agc ccg ggg act cct gcc cca 858
337  Glu Glu Thr Met Thr Thr Ser Pro Gly Thr Pro Ala Pro
339  210                 215                 220
343  gct gct gaa gag aca atg acc acc agc ccg ggg act cct 897
345  Ala Ala Glu Glu Thr Met Thr Thr Ser Pro Gly Thr Pro
347          225                 230                 235
351  gcc tct tct cat tac ctc tca tgc acc atc gta ggg atc 936
353  Ala Ser Ser His Tyr Leu Ser Cys Thr Ile Val Gly Ile
355                 240                 245
359  ata gtt cta att gtg ctt ctg att gtg ttt gtt t 970
361  Ile Val Leu Ile Val Leu Leu Ile Val Phe Val
W--> 363      250                 255             259
367  gaaagacttc actgtggaag aaattccttc cttacctgaa aggttcaggt 1020
371  aggcgctggc tgagggcggg gggcgctgga cactctctgc cctgcctccc 1070
375  tctgctgtgt tcccacagac agaaacgcct gcccctgccc caaaaaaaaa 1120
379  aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1170
383  aaaaaaaaaa 1180
387 <210> SEQ ID NO: 3
389 <211> LENGTH: 299
391 <212> TYPE: PRT
393 <213> ORGANISM: Homo sapiens
397 <400> SEQUENCE: 3
399  Met Gln Gly Val Lys Glu Arg Phe Leu Pro Leu Gly Asn Ser Gly
401    1               5                  10                  15
405  Asp Arg Ala Pro Arg Pro Pro Asp Gly Arg Gly Arg Val Arg Pro
407                 20                  25                  30
411  Arg Thr Gln Asp Gly Val Gly Asn His Thr Met Ala Arg Ile Pro
```

RAW SEQUENCE LISTING DATE: 12/21/2001
PATENT APPLICATION: US/09/887,879 TIME: 15:12:39

Input Set : N:\Crf3\RULE60\09887879.txt
Output Set: N:\CRF3\12212001\I887879.raw

```
413                    35                  40                  45
417  Lys Thr Leu Lys Phe Val Val Val Ile Val Ala Val Leu Leu Pro
419                    50                  55                  60
423  Val Leu Ala Tyr Ser Ala Thr Thr Ala Arg Gln Glu Glu Val Pro
425                    65                  70                  75
429  Gln Gln Thr Val Ala Pro Gln Gln Gln Arg His Ser Phe Lys Gly
431                    80                  85                  90
435  Glu Glu Cys Pro Ala Gly Ser His Arg Ser Glu His Thr Gly Ala
437                    95                 100                 105
441  Cys Asn Pro Cys Thr Glu Gly Val Asp Tyr Thr Asn Ala Ser Asn
443                   110                 115                 120
447  Asn Glu Pro Ser Cys Phe Pro Cys Thr Val Cys Lys Ser Asp Gln
449                   125                 130                 135
453  Lys His Lys Ser Ser Cys Thr Met Thr Arg Asp Thr Val Cys Gln
455                   140                 145                 150
459  Cys Lys Glu Gly Thr Phe Arg Asn Glu Asn Ser Pro Glu Met Cys
461                   155                 160                 165
465  Arg Lys Cys Ser Arg Cys Pro Ser Gly Glu Val Gln Val Ser Asn
467                   170                 175                 180
471  Cys Thr Ser Trp Asp Asp Ile Gln Cys Val Glu Glu Phe Gly Ala
473                   185                 190                 195
477  Asn Ala Thr Val Glu Thr Pro Ala Ala Glu Glu Thr Met Asn Thr
479                   200                 205                 210
483  Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu Glu Thr Met Asn Thr
485                   215                 220                 225
489  Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu Glu Thr Met Thr Thr
491                   230                 235                 240
495  Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu Glu Thr Met Thr Thr
497                   245                 250                 255
501  Ser Pro Gly Thr Pro Ala Pro Ala Ala Glu Glu Thr Met Thr Thr
503                   260                 265                 270
507  Ser Pro Gly Thr Pro Ala Ser Ser His Tyr Leu Ser Cys Thr Ile
509                   275                 280                 285
513  Val Gly Ile Ile Val Leu Ile Val Leu Leu Ile Val Phe Val
515                   290                 295
519 <210> SEQ ID NO: 4
521 <211> LENGTH: 1180
523 <212> TYPE: DNA
525 <213> ORGANISM: Homo sapiens
529 <220> FEATURE:
531 <221> NAME/KEY: CDS
533 <222> LOCATION: (73) . . . (969)
535 <223> OTHER INFORMATION:
539 <220> FEATURE:
541 <221> NAME/KEY: sig_peptide
543 <222> LOCATION: (73) . . . (194)
545 <223> OTHER INFORMATION:
549 <400> SEQUENCE: 4
551  gctgtgggaa cctctccacg cgcacgaact cagccaacga tttctgatag 50
```

RAW SEQUENCE LISTING DATE: 12/21/2001
PATENT APPLICATION: US/09/887,879 TIME: 15:12:39

Input Set : N:\Crf3\RULE60\09887879.txt
Output Set: N:\CRF3\12212001\I887879.raw

```
555  atttttggga gtttgaccag ag    atg caa ggg gtg aag gag 90
557                              Met Gln Gly Val Lys Glu
559                              -40                 -35
563  cgc ttc cta ccg tta ggg aac tct ggg gac aga gcg ccc 129
565  Arg Phe Leu Pro Leu Gly Asn Ser Gly Asp Arg Ala Pro
567                  -30                 -25
571  cgg ccg cct gat ggc cga ggc agg gtg cga ccc agg acc 168
573  Arg Pro Pro Asp Gly Arg Gly Arg Val Arg Pro Arg Thr
575      -20                 -15                 -10
579  cag gac ggc gtc ggg aac cat acc atg gcc cgg atc ccc 207
581  Gln Asp Gly Val Gly Asn His Thr Met Ala Arg Ile Pro
583                -5                  1                 5
587  aag acc cta aag ttc gtc gtc gtc atc gtc gcg gtc ctg 246
589  Lys Thr Leu Lys Phe Val Val Val Ile Val Ala Val Leu
591                   10                  15
595  ctg cca gtc cta gct tac tct gcc acc act gcc cgg cag 285
597  Leu Pro Val Leu Ala Tyr Ser Ala Thr Thr Ala Arg Gln
599       20                  25                  30
603  gag gaa gtt ccc cag cag aca gtg gcc cca cag caa cag 324
605  Glu Glu Val Pro Gln Gln Thr Val Ala Pro Gln Gln Gln
607                35                  40
611  agg cac agc ttc aag ggg gag gag tgt cca gca gga tct 363
613  Arg His Ser Phe Lys Gly Glu Glu Cys Pro Ala Gly Ser
615   45                  50                  55
619  cat aga tca gaa cat act gga gcc tgt aac ccg tgc aca 402
621  His Arg Ser Glu His Thr Gly Ala Cys Asn Pro Cys Thr
623            60                  65                  70
627  gag ggt gtg gat tac acc aac gct tcc aac aat gaa cct 441
629  Glu Gly Val Asp Tyr Thr Asn Ala Ser Asn Asn Glu Pro
631                   75                  80
635  tct tgc ttc cca tgt aca gtt tgt aaa tca gat caa aaa 480
637  Ser Cys Phe Pro Cys Thr Val Cys Lys Ser Asp Gln Lys
639        85                  90                  95
643  cat aaa agt tcc tgc acc atg acc aga gac aca gtg tgt 519
645  His Lys Ser Ser Cys Thr Met Thr Arg Asp Thr Val Cys
647              100                 105
651  cag tgt aaa gaa ggc acc ttc cgg aat gaa aac tcc cca 558
653  Gln Cys Lys Glu Gly Thr Phe Arg Asn Glu Asn Ser Pro
655  110                 115                 120
659  gag atg tgc cgg aag tgt agc agg tgc cct agt ggg gaa 597
661  Glu Met Cys Arg Lys Cys Ser Arg Cys Pro Ser Gly Glu
663          125                 130                 135
667  gtc caa gtc agt aat tgt acg tcc tgg gat gat atc cag 636
669  Val Gln Val Ser Asn Cys Thr Ser Trp Asp Asp Ile Gln
671                  140                 145
675  tgt gtt gaa gaa ttt ggt gcc aat gcc act gtg gaa acc 675
677  Cys Val Glu Glu Phe Gly Ala Asn Ala Thr Val Glu Thr
679      150                 155                 160
683  cca gct gct gaa gag aca atg aac acc agc ccg ggg act 714
```

VERIFICATION SUMMARY DATE: 12/21/2001
PATENT APPLICATION: **US/09/887,879** TIME: 15:12:40

Input Set : **N:\Crf3\RULE60\09887879.txt**
Output Set: **N:\CRF3\12212001\I887879.raw**

L:363 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:2
L:743 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:4
L:1247 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11